

XB1 Booster | Impedance Matcher Users Manual

As at 22th February 2014



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Dear Customer

Thank you for purchasing the Prostage XB1 Booster. The Booster | Impedance Matcher is a practical problem solver for wiring guitar racks. It can be used for various things, such as:

- As a Line Driver | Buffer Amp, meaning the first device in the signal chain to compensate for the sound loss due to long guitar cables.
- For impedance matching for an effects unit with incompatible input impedance.
- In a loop of the XDS | XLS as a simple solo boost.

The Prostage team wish you great sound with the new XB1 Booster and big success in your musical career.

Lukas Truninger
Founder & Developer



1.1 XB1 Booster Features

- Level-Booster | Line-Driver | Impedance Matcher
- Input impedance: 1 megaohms
- Output impedance: 100 ohm
- The booster does not have an On/Off switch.

1.2 Impedance

The impedance describes the electrical resistance of an audio connection. The resistance at the input is called "input impedance", the resistance at the output is called "output impedance".

If you connect your guitar to a stompbox, the guitar pickup has to drive the input of the stompbox. The lower the input impedance, the more the pickup must work, respectively, the stronger the pickup is loaded. Thus, the guitar signal is slowed down and it loses volume and transparency. For a high-quality signal transmission, the input impedance of the "signal consumer" (e.g. the stompbox) must be much higher compared to the output impedance of the signal supplier (e.g. the guitar).

Since guitar pickups have a relatively high output impedance and deliver only a low signal, the input impedance on guitar amps must be very high. Usually it is 1 megaohms. At HiFi or studio equipment, the input impedance is much lower (the advantage of a lower impedance is that the device is less noisy). Hence, if a guitar is connected to a studio device, the signal is slowed down by the too low input impedance. The guitar sound loses transparency.

Unfortunately, there is no mandatory standard for the impedance within the bunch of stompboxes. Some devices are optimized for guitars (with a very high input impedance). Other effect units comply to the studio standards. And there are also units somewhere in between.

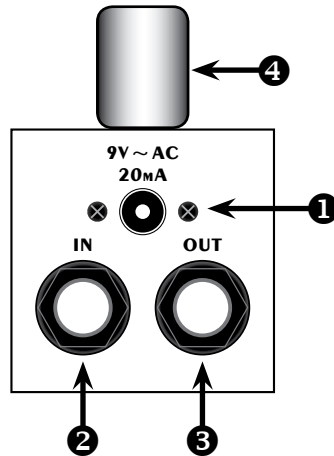
If several stompboxes are connected to a looper, the guitar might be routed once to a device with a high input impedance, and – in another loop configuration – the signal from the guitar encounters a low input impedance. Thus, the signal loses in volume and transparency as mentioned above.

To solve this problem, the Prostage Booster | Impedance Matcher can be set between the guitar and the devices. The booster has a very high input impedance, optimized for guitars, and a very low output impedance. Thus, stompboxes and studio effects devices can be connected to the booster.

The impedance matching can be carried out in two places:

- As the first device right after the guitar. The booster is, thus, placed firmly in the signal path and works as a line driver | buffer amp. The impedance matching is for the subsequent effect device. When using a looper, this means that the impedance matching is for the first stompbox activated by a loop ([see Example 3.1](#)).
- Directly in series before a certain stompbox with a too low input impedance. Like this, the booster is only in the signal path if the effect is switched on ([see Example 3.2](#)).

2 Connecting the XB1 Booster



1 Power Connector

The XB1 Booster must be powered necessarily using a **9V~AC** (alternating current) power supply. The Booster will not work with direct current (DC). Higher voltages can destroy the Booster.

2 In

Connect your Guitar to the [In] using a jack cable.

3 Out

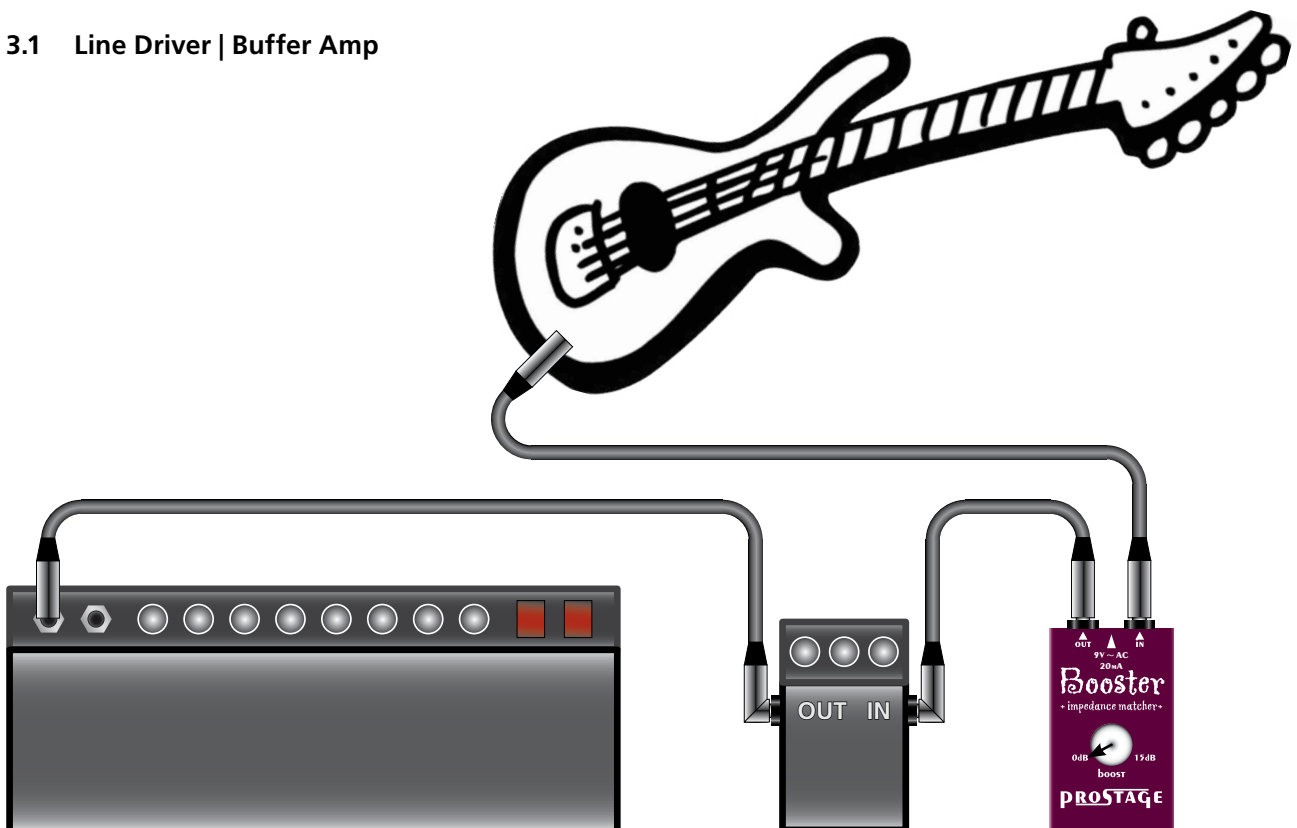
Connect the [Out] to your guitar amplifier or the next stompbox unit using a jack cable.

4 Boost

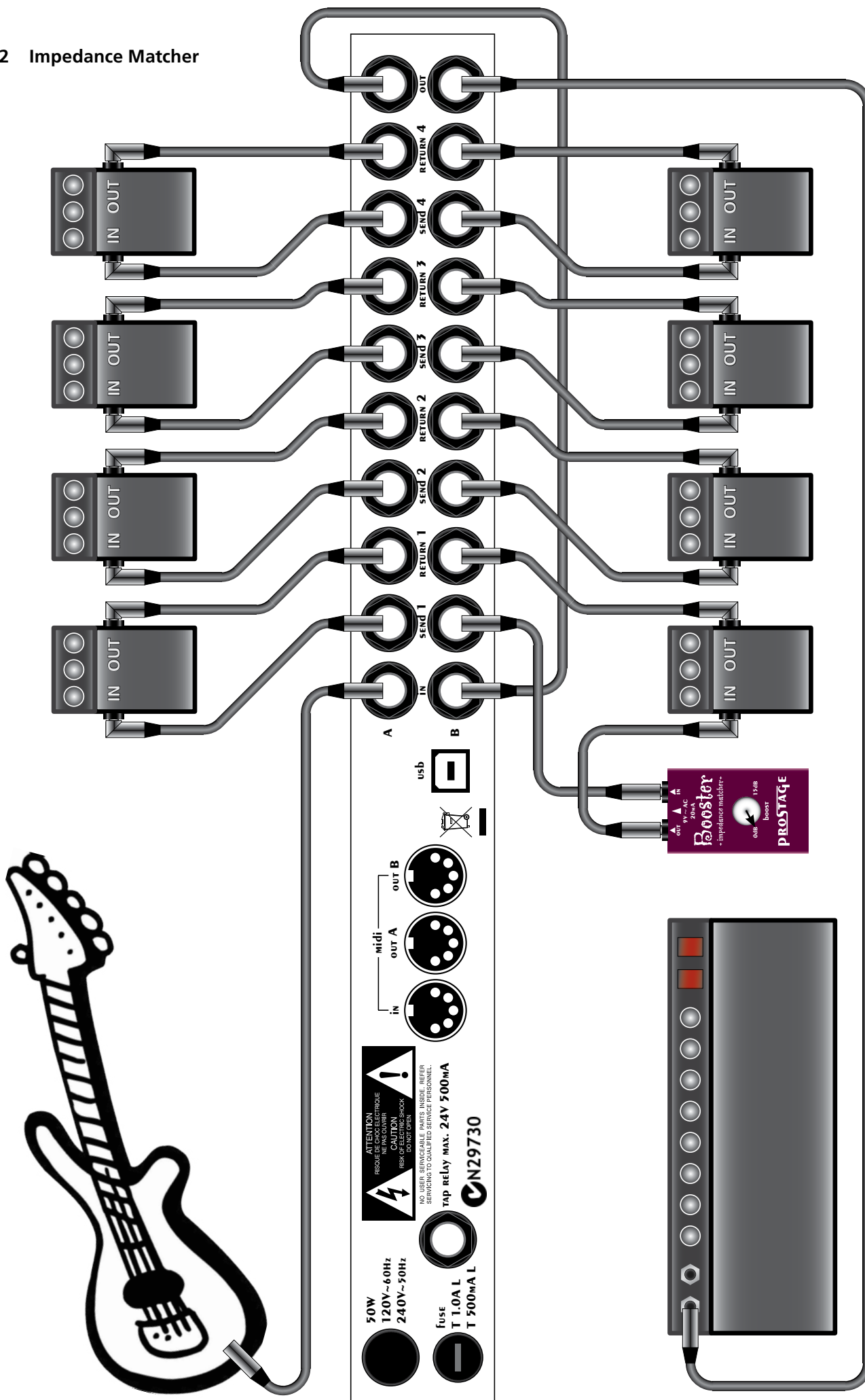
With the Boost potentiometer you can adjust the gain between 0dB (unity gain) and +15 dB.

3 Examples

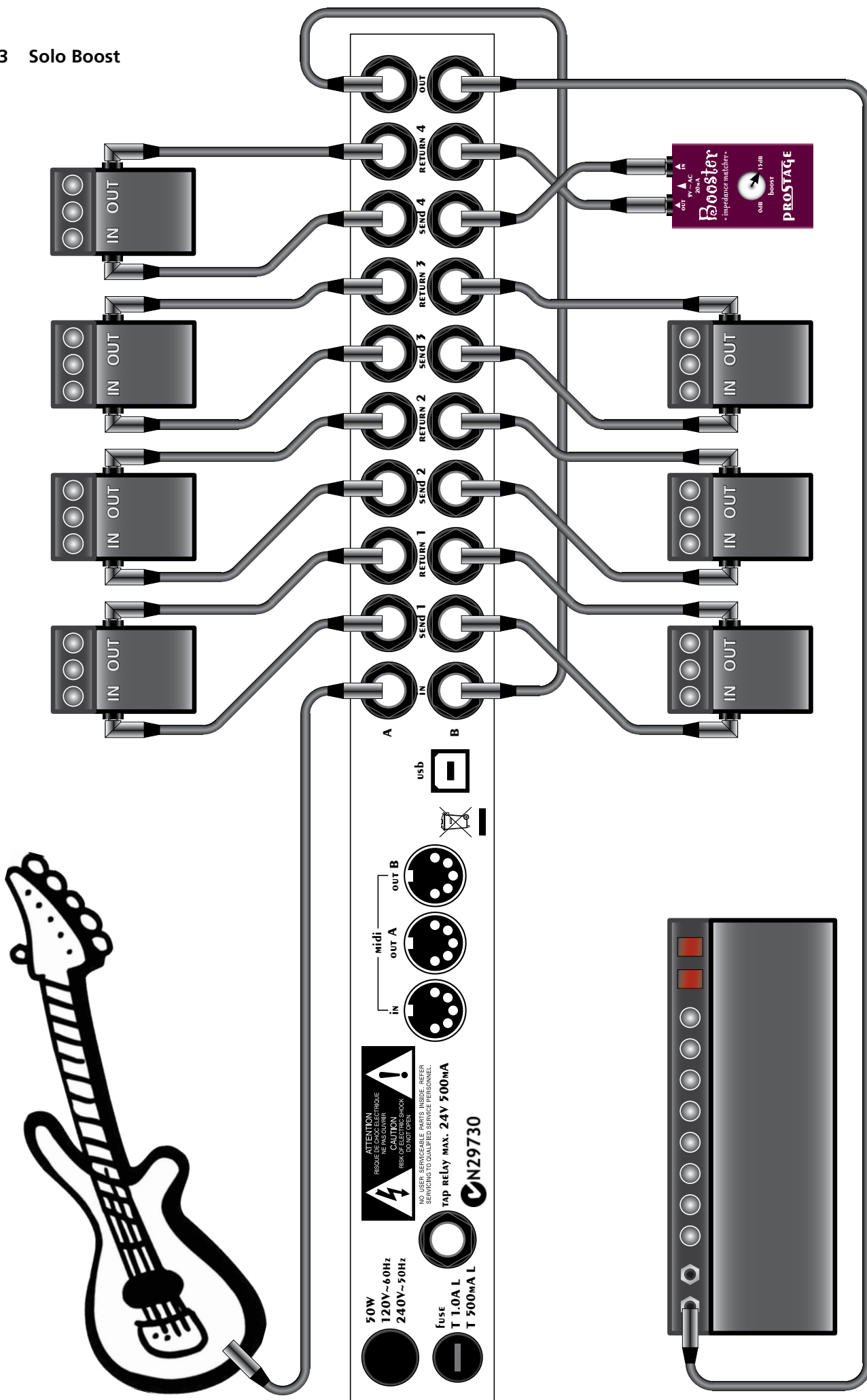
3.1 Line Driver | Buffer Amp



3.2 Impedance Matcher



3.3 Solo Boost



4 Warning Instructions and Warranty

4.1 Warnings and Safety Instructions

For reasons of the product liability, we are obligated to make clear certain safety aspects which must not be ignored under any circumstances. The devices must **not be stored or operated in damp or wet environment**. The XB1 Booster may only be operated with **9V~AC**.

The device serves as an audio effects unit and may be used for this purpose exclusively.

The equipment may be opened by qualified technical personnel only. There are no user serviceable parts inside the devices.

In order to avoid damages, you should be careful when transporting and setting up the device. Please **avoid strong variations in temperature**. Particularly the change from the cold transport vehicle to the, usually warm, stage can cause condensing humidity, which can cause leaks and thus can evoke defects. Usually, 60 minutes are sufficient to equalize the temperature. For transportation, always carry the devices in a robust packing or rack, especially if you change your place of work frequently.

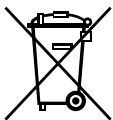
No containers filled with liquid may be placed on the equipment!

4.2 Warranty / Support

All Prostage PurpleLine units are covered by a 2-year warranty. Prostage shall not be liable if the damage was caused by inappropriate use or if the units are not connected as described in this users manual. There are no user serviceable parts inside the unit. The detailed terms of the warranty can be downloaded from the Prostage website.

If you need technical support, please contact your local dealer or email to info@prostage.eu

4.3 Disposal of Old Devices



The PurpleLine products are subject to the European guideline 2002/96/EC. All old electric and electronic devices must be disposed separately from the domestic waste, using the collection points provided by the government. The devices may not be disposed with domestic or skip refuse. Information about collecting points or collection dates, can be asked from the local administration or the local waste management company.

Please also carry the packing to an environmentally fair disposal. Cardboard boxes can be transferred with waste-paper collections or to the public collecting stations for recycling. Foils of the shipment are collected by the local waste management company and are forwarded to environmentally fair disposal.

5 Declaration of Conformity

Company: Prostage SL
Apdo 57
ES-07560 Cala Millor



Type of equipment: PurpleLine System

Trademarks: Prostage / StageWire

Model: XB1

The products meet the requirements of the following standards:

EMC: EN 55103-2 | EN 55103-1:2009 | EN 55103-2:2009
EN 61000-3-2
EN 61000-4-2 | EN 61000-4-3 | EN 61000-4-4 | EN 61000-4-5 | EN 61000-4-3 | EN 61000-4-11
Safety: IEC 60065:2001 | EN 60065:2002 / A1:2006 / Cor.:2007 / A11:2008

Year: 2011

A handwritten signature in black ink, appearing to be 'L. Truninger', is written over the year information.

Cala Millor, 14. Dezember 2011 Lukas Truninger, CEO

Information to the user:

Class B Statement:



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

